

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF ARKANSAS  
WESTERN DIVISION**

<b>In re:</b>	:	<b>MDL Docket No. 4:03CV1507 WRW</b>
	:	
<b>PREMPRO PRODUCTS LIABILITY</b>	:	<b><i>Reeves v. Wyeth, 4:05-cv-00163-WRW</i></b>
<b>LITIGATION</b>	:	<b><i>Rush v. Wyeth, et al., 4:05-cv-00497-WRW</i></b>
	:	

**No. 1**

**MEMORANDUM IN SUPPORT OF DEFENDANTS'  
MOTION TO EXCLUDE EXPERT TESTIMONY OF  
DRS. KLIMBERG AND WALDRON AS TO SPECIFIC CAUSATION**

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Plaintiffs’ proposed expert testimony regarding specific causation runs afoul of this Court’s observation that “courts should be mighty chary about outrunning their headlights in the field of medical science.”<sup>1</sup> Medical science *does not know* what causes breast cancer. Nor, except in rare cases of genetic defect or radiation treatment to the chest, can medical science say what causes breast cancer in a particular woman. Medical science has identified a number of risk factors for breast cancer, but lacks any test or method for determining whether this or that risk factor actually caused a woman’s cancer. At the heart of this scientific riddle is the fact—agreed to by all the experts as well as Plaintiffs’ doctors—that most women who develop breast cancer do not have any risk factors apart from being older women. That unknown is the “X” factor. Some women who take hormone therapy develop breast cancer, but most do not. For those who do develop breast cancer, medical science has no way of telling whether hormone

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<sup>1</sup> *In re Prempro Prods. Liab. Litig.*, 230 F.R.D. 555, 571 (E.D. Ark. 2005).

therapy or other risk factors that may be present played any role or whether the “X” factor<sup>2</sup> must be deemed the cause.<sup>3</sup>

As to Ms. Reeves and Ms. Rush, it is undisputed that there are **no** objective clinical data that would indicate whether their breast cancer was affected in any way by hormone therapy:

- Not the nature of the tumor itself (its size, shape, type, location, pattern, the characteristics of the cancer cells, or mitotic index (rate of cell division));
- Not the results of any blood test;
- Not what can be seen on any film or scan;
- Not what can be seen under a microscope;
- Not biomarkers of any other kind.

It is also undisputed that women have naturally circulating estrogen both before and after menopause, but that there is no test that can distinguish the lifetime effects of those naturally occurring hormones (the endogenous hormones) from those they ingested in the form of birth control pills or hormone therapy (the exogenous hormones). Simply put, there is **no** objective clinical data, and **no** diagnostic test, that can identify hormone therapy as “the” cause (or even “a” cause) of Plaintiffs’ breast cancer, **nor** is there any protocol, procedure, principle, or

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<sup>2</sup> The “X” factor may itself encompass multiple additional unknown factors because breast cancer is a complex, multifactorial process, many aspects of which are not yet clearly understood. *See* Deposition of Dr. Nigel J. Bundred (Jan. 17, 2006) (“Bundred Dep.”) (App., Ex. 4) at 126:10; 127:21.

<sup>3</sup> This brief assumes for purposes of argument that hormone therapy is capable of causing breast cancer. That is, we assume “general causation” for purposes of showing that, even so, Plaintiffs cannot prove “specific causation.” To succeed on their claims against Defendants, Plaintiffs must prove both general causation (that hormone therapy causes breast cancer generally) and specific causation (that hormone therapy caused their breast cancer specifically). *See, e.g., Norris v. Baxter Healthcare Corp.*, 397 F.3d 878, 881 (10th Cir. 2005).

methodology published in the medical literature or generally accepted in the scientific community for determining what caused a particular woman's breast cancer.

Plaintiffs' proposed experts on specific causation, Doctors Klimberg and Waldron, do not rely on any objective data and do not reliably employ any scientific method that has been published, peer-reviewed, or generally accepted in the scientific community. When they purport to rule out all other possible causes but hormone therapy, they are doing something that they do not do in their own practice, that Plaintiffs' treating doctors do not do, that other of Plaintiffs' experts have testified cannot be done, and that Defendants' experts say cannot be done. As Dr. Kent Westbrook, Distinguished Professor of Surgery at the University of Arkansas for Medical Sciences states: "In reaching their conclusions, Drs. Klimberg and Waldron do not follow any methodology that has been validated or generally accepted as a method to determine the cause of a particular woman's breast cancer. Given the present state of knowledge about the potential influence of hormone therapy on breast cancer, any conclusions that hormone therapy in a particular woman caused or affected her breast cancer is much more likely to be wrong than right."<sup>4</sup>

In sum, the testimony of Drs. Klimberg and Waldon that hormone therapy caused Plaintiffs' breast cancer is speculation.<sup>5</sup> "Personal opinion, not science, is testifying here,"<sup>6</sup> and personal opinions fail to satisfy the established requirements of *Daubert* and are inadmissible under Rule 702.

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<sup>4</sup> Affidavit of Dr. Kent Westbrook ("Westbrook Aff.") (App., Ex. 36) ¶ 3.

<sup>5</sup> It is also in contravention of the enormous body of epidemiological data—including the WHI study which is Plaintiffs' "gold standard"—that shows that hormone therapy does not more than double the risk of breast cancer.

<sup>6</sup> *Daubert v. Merrell Dow Pharm., Inc.*, 43 F.3d 1311, 1319 (9th Cir. 1995) ("*Daubert II*") (quoting *Turpin v. Merrell Dow Pharm., Inc.*, 959 F.2d 1349, 1360 (6th Cir. 1992)).

## ARGUMENT

### **I. THE OPINIONS OF DRS. KLIMBERG AND WALDRON WERE CREATED EXCLUSIVELY FOR THIS LITIGATION AND DO NOT REPRESENT THEIR USUAL PRACTICE OR FIELDS OF RESEARCH.**

The threshold question for the *Daubert* gatekeeper is whether the expert is bringing into the courtroom the opinions formed already in the course of his everyday professional life, and growing out of that activity, or whether the opinions have been concocted for litigation, having never been offered and tested elsewhere.<sup>7</sup> The answer for Drs. Klimberg and Waldron is that they are venturing opinions for the first time—for a price. For this reason alone, their testimony is unreliable for purposes of Rule 702.

Dr. Suzanne Klimberg is a surgeon whose areas of research relate principally to the prevention of breast cancer through nutrition and the treatment of breast cancer with drugs such as Tamoxifen.<sup>8</sup> She has never published—or even presented—the opinions regarding the cause of breast cancer that she has provided for Plaintiffs here,<sup>9</sup> and she admits that the expert report she prepared for Plaintiffs was dashed off in a 24-hour period<sup>10</sup> and fails to adhere to the same standards of objectivity she would apply to a peer-reviewed article.<sup>11</sup> When asked whether, in

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<sup>7</sup> *Id.* at 1317 (“One very significant fact to be considered [in deciding whether to admit expert scientific testimony] is whether the experts are proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying.”).

<sup>8</sup> Report of Dr. Suzanne Klimberg (“Klimberg Rep.”) (App., Ex. 21) at 1; Deposition of Dr. Suzanne Klimberg (Apr. 10 and 27, 2006) (“Klimberg Dep.”) (App., Ex. 19) at 104:22-105:18.

<sup>9</sup> Klimberg Dep. at 268:14-16; 269:14-23. She has not even *attempted* to publish her opinions.

<sup>10</sup> As Dr. Klimberg explained, because of a “timeline crunch,” she “basically stayed up all night and just prepared the report.” *Id.* at 95:1-5.

<sup>11</sup> *Id.* at 277:17-278:8.

drafting her report, she attempted “to present a balanced review of the literature” on hormone therapy and breast cancer, Dr. Klimberg replied, “Did I make a balanced attempt? I would not say it’s that balanced in terms of—in this—the charge I was given [w]as to make my case. ***It’s less balanced than I would make for a peer review article.***”<sup>12</sup> These admissions are damning, for the fact “[t]hat plaintiffs’ experts have been unable or unwilling to publish their work undermines plaintiffs’ claim that the findings these experts proffer are ‘ground[ed] in the methods and procedures of science’ and ‘derived by the scientific method.’”<sup>13</sup> Moreover, *Daubert* discourages “the hiring of reputable scientists . . . to testify for a fee to propositions that they have not arrived at through the methods . . . they use when they are doing their regular professional work rather than being paid to give an opinion helpful to one side in a lawsuit.”<sup>14</sup> For her admittedly slipshod report—which suffers from errors ranging from the minor (typographical mistakes)<sup>15</sup> to the major (a withdrawn opinion regarding Ms. Rush’s breast tissue density)<sup>16</sup>—Dr. Klimberg charged Plaintiffs \$1,000 per hour.<sup>17</sup> To paraphrase, money, not science, is testifying here.<sup>18</sup>

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<sup>12</sup> *Id.* at 278:3-8 (emphasis added).

<sup>13</sup> *Daubert II*, 43 F.3d at 1318 n.9 (citation omitted).

<sup>14</sup> *Braun v. Lorillard Inc.*, 84 F.3d 230, 235 (7th Cir. 1996).

<sup>15</sup> Klimberg Dep. at 95:1-5.

<sup>16</sup> *Id.* at 406:11-20.

<sup>17</sup> Klimberg Rep. at 2.

<sup>18</sup> *Daubert II*, 43 F.3d at 1317 (“That an expert testifies for money does not necessarily cast doubt on the reliability of his testimony, as few experts appear in court merely as an eleemosynary gesture. But in determining whether proposed expert testimony amounts to good science, we may not ignore the fact that a scientist’s normal workplace is the lab or the field, not the courtroom or the lawyer’s office.”).



Dr. James Waldron is a pathologist whose principal areas of research are lymphoma, leukemia, and interstitial lung disease.<sup>19</sup> Before being retained by Plaintiffs, his previous experience with breast cancer was limited to analyzing breast biopsies and determining whether the tissue was cancerous, not identifying the cause of the cancer.<sup>20</sup> Like Dr. Klimberg, Dr. Waldron has never published the opinions he expresses in this litigation regarding the identification of hormone therapy as the cause of a particular woman's breast cancer.<sup>21</sup>

**II. THE CAUSATION OPINIONS OFFERED BY DRS. KLIMBERG AND WALDRON ARE NOT THE PRODUCT OF SUFFICIENT FACTS AND RELIABLE METHODOLOGY, AS REQUIRED BY RULE 702.**

Rule 702 mandates that, to be admissible, an expert's opinion must be (1) based upon sufficient facts or data, (2) the product of reliable principles and methods, and (3) arrived at through the reliable application of those principles and methods to the particular facts of the case.<sup>22</sup> The failure to satisfy any of these criteria renders the testimony inadmissible, and Dr. Klimberg and Dr. Waldron fail to satisfy all three. We consider them below, one by one.

**A. The Opinions Are Not Based on Sufficient Facts or Data.**

The foundation of any reliable scientific opinion is objective data, but such data does not exist here. There is no test that can identify the cause of a particular woman's breast cancer; there is no defining feature that separates breast cancer allegedly caused by hormone therapy from other breast cancers; and there is no scientific means to segregate the effect of the

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<sup>19</sup> Deposition of Dr. James A. Waldron (Apr. 17-18, 2006) ("Waldron Dep.") (App., Ex. 27) at 324:17-325:3.

<sup>20</sup> *Id.* at 309:23-311:23.

<sup>21</sup> *Id.* at 324:17-325:7; 326:7-9.

<sup>22</sup> Fed. R. Evid. 702.

hormones that naturally circulate through every woman—both before and after menopause—from any effect produced by hormones taken by a woman after menopause.

**1. Scientists do not know what causes breast cancer in an individual woman.**

Despite decades of study, the cause of breast cancer remains a mystery. Although doctors can test for the presence of breast cancer, they *cannot* test for its cause. Science has identified a number of risk factors for breast cancer—*i.e.*, factors that have been associated with an increased incidence of breast cancer in large populations of women.<sup>23</sup> That association, however, does not reflect a determination that those risk factors cause breast cancer, nor does it allow a determination that one or more of those risk factors caused breast cancer in a particular woman, a point forcefully made by the American Cancer Society in late 2005:

A risk factor is anything that increases your chance of getting a disease, such as cancer. Different cancers have different risk factors. For example, exposing skin to strong sunlight is a risk factor for skin cancer. Smoking is a risk factor for cancers of the lung, mouth, larynx, bladder, kidney, and several other organs.

But having a risk factor, or even several, does not mean that you will get the disease. Most women who have one or more breast cancer risk factors never develop the disease, while many women with breast cancer have no apparent risk factors (other than being a woman and growing older). *Even when a woman with breast cancer has a risk factor, there is no way to prove that it actually caused her cancer.*<sup>24</sup>

Need one say more than that being left-handed is a risk factor for breast cancer?<sup>25</sup>

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<sup>23</sup> See pp. 22-24, *infra*, regarding the risk factors for breast cancer.

<sup>24</sup> American Cancer Society, *Detailed Guide: Breast Cancer, What Are the Risk Factors for Breast Cancer?* (2005) (emphasis added) (App., Ex. 41).

<sup>25</sup> Made K. Ramadhani et al., *Innate Left Handedness and Risk for Breast Cancer: Case-Cohort Study*, *British Medical Journal* (2005) 331:882-3 (App., Ex. 57).

The American Cancer Society's statement about the current limits of medical knowledge is not controversial. Defendants' experts say the same thing. Dr. Westbrook acknowledges that "it is accepted in the medical and scientific communities that, at the present time, there is no way to determine if a particular risk factor which may place a woman at an increased risk caused the development of a specific woman's breast cancer."<sup>26</sup> So, too, do Plaintiffs' treating doctors, Drs. Kozlowski, Harrington, Hagans, and Jones.<sup>27</sup> Indeed, both Drs. Klimberg and Waldron admit that, despite the identification of a number of risk factors, scientists and doctors simply do not know what causes breast cancer:

Q. . . . And even though doctors and scientists have identified risk factors for developing breast cancer, they still don't know what causes breast cancer. Isn't that correct?

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<sup>26</sup> Westbrook Aff. ¶ 3; *see also* Declaration of Dr. Michael Edwards ("Edwards Decl.") (App., Ex. 31) ("Even in a woman with other recognized risk factors which have been associated with an increased risk of breast cancer, there is no scientifically established or accepted method for determining whether any of those risk factors actually caused or contributed to cause that woman's cancer."); Declaration of Dr. Thomas Stovall ("Stovall Decl.") (App., Ex. 35) ("[T]here is no generally accepted test, procedure, or method for determining the cause of a particular patient's breast cancer.").

<sup>27</sup> Dr. Kozlowski testified:

Q: And even if a woman has a risk factor for breast cancer, such as a family history, or excess alcohol consumption, or obesity, you can't be sure that that's what caused her breast cancer?

A: Correct.

Deposition of Dr. Karen Kozlowski (Jan. 6, 2006) ("Kozlowski Dep.") (App., Ex. 40) at 34:22-35:1; *see also* Deposition of Dr. Mariann Harrington (May 5, 2006) ("Harrington Dep.") (App., Ex. 38) at 31:19-20 ("The majority of women, it is spontaneous, and no, we don't know what causes it"); Deposition of Dr. James Hagans (Apr. 28, 2006) ("Hagans Dep.") (App., Ex. 37) at 64:23-24 ("Well, I think the main reason [we don't tell a woman what caused her breast cancer] is we don't know what the cause is"); Deposition of Dr. John Jones (Apr. 14, 2006) ("Jones Dep.") (App., Ex. 39) at 18:21-23; ("I may not tell [a patient] what I think caused [her breast cancer]. I may not know. Usually, I don't.").

A. Yes.<sup>28</sup>

**2. There is no test to identify the cause of breast cancer.**

Drs. Klimberg and Waldron propose to testify that they have identified the particular cause of Plaintiffs' breast cancers, and that the cause is hormone therapy. But both concede—and agree with Dr. Westbrook and other defense experts<sup>29</sup>—that there is no *test* to determine a particular cause for any woman's breast cancer:

Q. For any individual woman, there is ***no accepted scientific technique*** for determining what it is that caused her breast cancer. Correct?

A. Correct.<sup>30</sup>

This means that, should anyone opine that hormone therapy caused a particular woman's breast cancer, there is no way to validate that opinion. Dr. Klimberg agreed:

Q. Do you know if there's a test that a pathologist can do if handed a set of slides that would allow that pathologist to determine was this woman taking hormone therapy at the time the lumpectomy was done?

A. Not to my knowledge.<sup>31</sup>

Or as Dr. Waldron testified about the slides of cancer cells:

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<sup>28</sup> Waldron Dep. at 71:1-5; *see also* Klimberg Dep. at 125:3-126:20; 130:2-21.

<sup>29</sup> Westbrook Aff. ¶ 3 (“There is no method or technique that has been tested, verified, or validated for determining the specific cause of an individual woman's breast cancer.”); Edwards Decl. (“There is no reliable or regularly acknowledged scientific method to determine the cause of any individual woman's breast cancer.”); Stovall Decl. (““[T]here is no generally accepted test, procedure or method for determining the cause of a particular patient's breast cancer.””).

<sup>30</sup> Waldron Dep. at 75:2-5 (emphasis added); *see also* Klimberg Dep. 241:5-16.

<sup>31</sup> Klimberg Dep. at 238:4-10; *see also id.* at 405:13-406:10.

Q: And in terms of looking at this stain, . . . is there any way that you can tell by looking at these pictures whether Ms. Reeves ever used hormone replacement therapy?

A: No.<sup>32</sup>

**3. There is no physical characteristic that distinguishes breast cancers based on their cause.**

Some diseases have characteristics that are so distinctive that the presence of those characteristics can positively identify the cause of the disease. According to Dr. Waldron, scientists can positively identify asbestos-caused lung cancer, for example, because the particular form of lung cancer (mesothelioma) rarely, if ever, appears in the absence of asbestos exposure. But Dr. Waldron admits that there is no form of breast cancer that is peculiar to hormone therapy and currently there is *no* known physical characteristic of a supposed hormone therapy-induced breast cancer cell:

Q. Well, in terms of mesothelioma[], it is virtually never seen except for in people exposed to asbestos. Correct?

A. That's right.

Q. And that's not true for any type of breast cancer. Is that right?

A. Right.<sup>33</sup>

This fact is generally accepted and was acknowledged by another of Plaintiffs' experts, Dr. Peter Gann:

Q. Are there any biological markers that would allow one to determine what the cause of a particular woman's breast cancer was?

A. No.<sup>34</sup>

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<sup>32</sup> Waldron Dep. at 341:2-7.

<sup>33</sup> *Id.* at 365:13-19.

<sup>34</sup> Deposition of Dr. Peter Gann (Jan. 24, 2006) ("Gann Dep.") (App., Ex. 11) at 57:21-24.

Or, as yet another of Plaintiffs' experts testified, even though a woman may have multiple risk factors, scientists do not yet "have the individual markers of exposure at the tumor level to tell individual women which of their factors caused their cancer."<sup>35</sup>

This fact means that, when Drs. Klimberg and Waldron opine that hormone therapy caused Plaintiffs' breast cancers, they are not pointing to test results or hard data—they are guessing.

**4. There is no way to separate the effect of naturally-occurring hormones and hormone therapy.**

The guessing is all the greater, for Drs. Klimberg and Waldron must concede two things. First, breast cancer occurs in women (and men) who have *never* taken exogenous hormones such as hormone therapy.

Q. [C]an a woman get breast cancer without ever taking hormone replacement therapy?

A. Yes. *Any* individual can particularly get breast cancer, man or woman.<sup>36</sup>

Second, they must also concede that, even assuming that exposure to hormones caused breast cancer, there is no *test* or *procedure* to separate the effect of endogenous hormones from the alleged effect of exogenous hormones:

Q. Is there any way to segregate out the effect of her endogenous hormones from the exogenous hormones?

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<sup>35</sup> Deposition of Dr. Graham Colditz (May 2, 2006) ("Colditz Dep.") (App., Ex. 7) at 182:2-5. Dr. Colditz observed that, although there is currently "enormous research ongoing to better characterize tumors with molecular markers," including some experimental assays, the use of such assays is "not yet standard clinical practice" or approved as the standard of care in the guidelines of the American Society of Clinical Oncology. *Id.* at 219:10-222:22.

<sup>36</sup> Klimberg Dep. at 124:7-12 (emphasis added). She also conceded the converse: "I would agree that most women that take hormone replacement therapy never get breast cancer." *Id.* at 125:7-9; *see also* Waldron Dep. at 75:20-76-11.

A. *There is no way to measure that.*

Q. They both are affecting her breasts at the same time, correct?

A. Yes.

Q. And she has these hormone receptors in her breasts, and those receptors respond to endogenous estrogen the same way they respond to exogenous estrogen, correct?

A. Right, right.<sup>37</sup>

\* \* \*

Q. *Okay. And so when you look at [a] tumor in the lab, is there any way that you can tell to what extent the tumor's growth is being affected by its exposures to hormones, whether they are endogenous or exogenous?*

A. *No.*<sup>38</sup>

*Every* woman, before and after menopause, has endogenous hormones circulating through her body. Thus, Plaintiffs' experts must be able to differentiate the alleged effect caused by the hormones in hormone therapy from the effect caused by a woman's natural hormone levels before menopause, or even by the lower levels that are present after menopause. In their non-litigation work, Plaintiffs' experts emphasize that the risk of breast cancer is predominately determined by *premenopausal* events (and, therefore, by endogenous hormones). The title of one of those experts' articles says it all: "Models of Breast Cancer Show that Risk Is Set by Events in Early Life: Prevention Efforts Must Shift."<sup>39</sup> Despite the importance of premenopausal

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<sup>37</sup> Klimberg Dep. at 509:24-510:11 (emphasis added); *id.* at 511:17-22, 512:10-15.

<sup>38</sup> Waldron Dep. 330:8-13 (emphasis added).

<sup>39</sup> Graham A. Colditz & A. Lindsay Frazier, *Models Of Breast Cancer Show That Risk Is Set By Events Of Early Life: Prevention Efforts Must Shift Focus*, 4 Cancer Epidemiology, Biomarkers & Prevention 567 (1995) (App., Ex. 45). Other articles make the same point: Colditz, *Hormones and Breast Cancer: Evidence and Implications for Consideration of Risks and Benefits of Hormone Replacement Therapy*, Journal of Women's Health (1999) (App.,

endogenous hormones, however, Drs. Klimberg and Waldron have not considered and do not rule them out. Similarly, normal breast tissue makes hormones, and does so during and after menopause. In their non-litigation work, Plaintiffs' experts say that these hormones in tissue are higher than hormone levels in the blood and are more relevant to the risk of breast cancer.<sup>40</sup> As Dr. Waldron conceded, "certainly even the very low levels of estrogen that a woman continues to make in menopause could help those tumors survive and progress."<sup>41</sup> But he and Dr. Klimberg have not considered and do not rule out the effects of postmenopausal endogenous hormones either.

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Ex. 46) 3:347-57 ("The rate of breast cancer in postmenopausal women is largely determined by the timing and number of births."); Colditz, *A Biomathematical Model of Breast Cancer Incidence: The Contribution of Reproductive Factors to Variation in Breast Cancer Incidence*, Accomplishments in Cancer Research (1996) (App., Ex. 44) 116-24 ("The overall magnitude of the risk of breast cancer diagnosis by age 70 is primarily a function of age at first birth and subsequent parity."); Hankinson, et al., *Reproductive Factors and Family History of Breast Cancer in Relation to Plasma Estrogen and Prolactin Levels in Postmenopausal Women in the Nurses' Health Study (United States)*, Cancer Causes and Control (1995) (App., Ex. 51) 6:217-24 ("Endogenous hormones are considered to play a central role in the development of breast cancer in women . . .").

<sup>40</sup> Hankinson, et al. (Plaintiffs' expert Graham Colditz is a co-author), *Plasma Sex Steroid Hormone Levels and Risk of Breast Cancer in Postmenopausal Women*, Journal of the National Cancer Institute (1998) (App., Ex. 52) 90:1292-99; Chatterton *et al.* (Plaintiffs' expert Peter Gann is a co-author), *Comparison of Hormone Levels in Nipple Aspirate Fluid of Pre- and Postmenopausal Women: Effect of Oral Contraceptives and Hormone Replacement*, Journal of Clinical Endocrinology & Metabolism (2005) (App., Ex. 43) 90:1686-91.

<sup>41</sup> Waldron Dep. at 166:20-23. See Edwards Decl. ("[T]here is no sound scientific basis for differentiating what effect, if any, endogenous hormones versus exogenous hormones may have on any woman's breast cancer."). Plaintiffs' expert Dr. Craig Jordan testified: "The woman's own estrogen almost certainly promotes the growth of ER positive breast cancers outside the issue of adding exogenous estrogen to that patient."). Deposition of Dr. Virgil Craig Jordan (Jan. 9, 2006) ("Jordan Dep.") (App., Ex. 18) at 172:16-21.



### 5. Epidemiology does not establish specific causation.

Plaintiffs' experts agree that epidemiological studies cannot establish that hormone therapy caused breast cancer in Ms. X or Ms. Y. They make the point that, although epidemiological studies have identified a number of factors associated with an increased incidence of breast cancer, epidemiology is concerned with the incidence of disease in populations and that "specific causation, is beyond the domain of the science of epidemiology."<sup>42</sup> Plaintiffs' expert epidemiologist, Dr. Graham Colditz, embraced these basic facts about epidemiology:

- It identifies increased risks in the aggregate, but does not attribu[te] "cause at the individual level."<sup>43</sup>
- "[E]pidemiology doesn't spend its time looking at the cause in the individual."<sup>44</sup>
- "We know that alcohol is a cause of breast cancer. We can clearly delineate at the population level that alcohol both increases risk, and we can estimate that 3 to 4 percent of all breast cancer in the United States is caused by alcohol consumption in women, but we cannot delineate which of the breast cancers is the 4 percent caused by [alcohol] and which is the 96 percent that isn't caused."<sup>45</sup>

Dr. Klimberg, too, acknowledged these limitations. She testified that, even though WHI reported eight more cases (38 versus 30) of breast cancer per 10,000 women per year in the group that used hormone therapy versus the group that took a sugar pill,<sup>46</sup> there is no way to determine for

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<sup>42</sup> Fed. Judicial Ctr., *Reference Manual on Scientific Evidence* 381 (2d ed. 2000).

<sup>43</sup> Colditz Dep. at 25:13-14.

<sup>44</sup> *Id.* at 37:16-18.

<sup>45</sup> *Id.* at 129:20-130:9.

<sup>46</sup> This incidence is after 5.6 years of use.

any individual woman whether she represents one of those eight cases or one of the thirty cases who got breast cancer for other reasons (or no known reason).

Q: And so is there any way that anyone can determine which of the 38 women would have gotten breast cancer whether they used hormone therapy or not?

\* \* \*

A: So which—could we pick out which eight?

Q: Correct.

A: Not to my knowledge.<sup>47</sup>

This explanation of epidemiological evidence is correct as far as it goes.<sup>48</sup> But it is no surprise that Plaintiffs put the epidemiological evidence to one side. The study that Plaintiffs have treated since the outset of this litigation as the evidentiary gold standard—the WHI study—reported a relative risk of breast cancer as 1.24. Not only is this level of risk lower than that for almost every other breast cancer risk factor,<sup>49</sup> it is in the words of other Plaintiffs’ experts “very low,”<sup>50</sup> and translates into an absolute risk for a woman aged 50 (Ms. Reeves was 53 when she started taking hormone therapy; Ms. Rush was 55) that is “very, very low.”<sup>51</sup>

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<sup>47</sup> Klimberg Dep. at 241:5-16.

<sup>48</sup> The courts have recognized that epidemiology can provide circumstantial evidence of causation, provided that “plaintiffs carry their traditional burden; they must prove that their injuries were the result of the accused cause and not some independent factor.” *Daubert II*, 43 F.3d at 1319. “In terms of statistical proof,” as the *Daubert II* court explained, this means that a plaintiff must establish not just that drug “increased somewhat the likelihood” of injury, “but that it more than doubled it.” *Id.* at 1320. This means that “the relative risk must be greater than 2.0.” *Merrill Dow Pharm., Inc. v. Havner*, 953 S.W.2d 706, 717 (Tex. 1997).

<sup>49</sup> See p. 21, *infra*.

<sup>50</sup> Gann Dep. at 288:22-289:2; Deposition of Dr. Adriane J. Fugh-Berman (Mar. 7, 2006) (“Fugh-Berman Dep.”) (App., Ex. 9) at 350:17-22; Deposition of Dr. Klim McPherson (Mar. 9, 2006) (“McPherson Dep.”) (App., Ex. 24) at 161:2 (“It’s not a serious risk at 1.26 . . .”).

<sup>51</sup> Gann Dep. at 155:20; Fugh-Berman Dep. at 350:17-22.

Lacking hard epidemiological evidence that hormone therapy is associated with a high risk of breast cancer, Drs. Klimberg and Waldron seek to substitute a second-best, subjective, so-called “differential diagnosis.” As we explain in Section B below, their brand of “differential diagnosis” is not scientifically reliable or valid.

\* \* \*

In sum, a scientific opinion does not have a reliable foundation unless that opinion is built on objective facts and data. But here, the only objective evidence that Drs. Klimberg and Waldron can point to is the fact of Plaintiffs’ breast cancers. There are no data that allow them to trace a path from the cancer to its cause. That is because—as they and other of Plaintiffs’ experts concede, and as Defendants’ experts confidently explain—there is no scientific test that determines what caused a particular woman’s breast cancer, or that produces objective data leading to such a determination.

**B. The Opinions Are Not the Product of Reliable Principles and Methods.**

Rule 702 also requires an expert’s opinion to be “the product of reliable principles and methods.”<sup>52</sup> The expert’s own “say so” that he is doing what persons in his field routinely do is not enough. Rule 702’s reference to “reliable principles and methods” means that the court must look behind the expert’s credentials to determine whether the method and manner by which he has moved from the data to his opinions is recognizably scientific and not contrived for purposes of litigation.<sup>53</sup> Where breast cancer is concerned, there is no recognized method by

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<sup>52</sup> Fed. R. Evid. 702.

<sup>53</sup> *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999) (requiring an expert to employ “in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field”); *Daubert II*, 43 F.3d at 1317 (“One very significant fact to be considered [in deciding whether to admit expert scientific testimony] is whether the experts are proposing to testify about matters growing naturally and directly out of research they

which doctors can move from diagnosis to a determination of cause. Indeed, it is not even something doctors attempt to do. Plaintiffs' expert, Dr. Gann, frankly admitted that it is "sort of common knowledge[] that we don't expect physicians to analyze individual causation."<sup>54</sup> Here, Drs. Klimberg and Waldron undertake to do just that—although they do not do it in their everyday practice.<sup>55</sup> In doing so for purposes of the litigation, they purport to rely on the method of "differential diagnosis."<sup>56</sup> As explained below, differential diagnosis is not an accepted or scientifically defensible method for determining the cause of a particular woman's breast cancer. And, even if it were, Drs. Klimberg and Waldron have applied it in a slapdash way that cannot satisfy minimal *Daubert* scrutiny. As Dr. Westbrook states, they go about it in a way that results in their opinion being much "more likely to be wrong than right."<sup>57</sup>

**1. Differential diagnosis is not a reliable methodology to determine the cause of breast cancer.**

Differential *diagnosis* is just that: a method for diagnosing what disease is present, not for identifying the cause of the disease. When a patient presents with breathing difficulties, differential diagnosis is the means by which the examining doctor decides whether the problem is bronchitis, emphysema, pneumonia or lung cancer, not whether the underlying cause of the

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have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying.”).

<sup>54</sup> Gann Dep. at 61:21-23.

<sup>55</sup> Drs. Klimberg and Waldron testified that they ordinarily do not—and cannot—assign a cause to a particular woman's breast cancer. Klimberg Dep. at 257:10-258:2; Waldron Dep. at 72:13-73:15.

<sup>56</sup> Dr. Klimberg acknowledged that the purpose of differential diagnosis is to identify the disease and not the cause. Klimberg Dep. at 484:11-15 (“So the—and the differential was, you know, her breast cancer; right? But the, you don't necessary any [*sic*] list cause, you list what you need to do about it.”).

<sup>57</sup> Westbrook Aff. ¶ 3.

problem, once identified, is smoking, a lifetime of work in the coal mines or something else.<sup>58</sup>

There may be exceptions to that generalization, but, whatever they are, Plaintiffs' experts and defendants' experts agree that the technique of differential diagnosis is not used by doctors to determine the cause of an individual patient's breast cancer. Dr. Waldron himself (although he purports to use the technique to identify the cause of Plaintiffs' breast cancers) admits that there is *nothing* "in the medical literature that suggests that it is possible to use this methodology [of differential diagnosis] to accurately identify the cause of breast cancer."<sup>59</sup> His fellow expert, Dr. Gann, concurs, testifying that he has *never* seen an article that identifies a method for determining what caused a particular woman's breast cancer: "[T]hat's not something that we see in the medical literature. . . ."<sup>60</sup> Defendants' expert, Dr. Michael Edwards, is even more direct:

Q: Does a differential diagnosis with regard to breast cancer ever include the cause of the breast cancer?

A: No.

Q: Do you have an opinion as to why not?

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<sup>58</sup> In *Turner v. Iowa Fire Equipment Co.*, the Eighth Circuit observed that differential diagnosis could be used to establish causation in the absence of epidemiological studies, but it affirmed the district court's exclusion of the treating doctor's opinion on causation, because "Dr. Hof acknowledged that the differential diagnosis he performed was for the purpose of identifying [the plaintiff's] *condition*, not its *cause*." The court went on to explain that "Dr. Hof's diagnosis was, we believe, one which the medical community more properly identifies as 'differential,' *see, e.g.,* Stedman's Medical Dictionary 474 (26th ed. 1995) (identifying differential diagnosis as a systematic comparison of symptoms to determine which of two or more *conditions* is the one from which a patient is suffering) . . . ." 229 F.3d at 1208 (emphasis in original).

<sup>59</sup> Waldron Dep. at 366:4-9.

<sup>60</sup> Gann Dep. at 59:2-3. Nor has Dr. Gann heard any such methodology discussed at seminars. *Id.* at 59:12-14.

A: Well, that's not what a differential diagnosis is. . . . That says nothing about what caused the pathological entity in the first place. ***And until this deposition, I had never heard anybody talk about differential diagnosis in the context of causation.***<sup>61</sup>

Or, as Dr. Stovall states, "it is not scientifically valid or generally accepted in the medical community that the cause of breast cancer in an individual woman can be identified by the process of eliminating other known risk factors."<sup>62</sup>

There is a good reason why the technique cannot be used for this purpose. Differential diagnosis proceeds by a process of elimination. To identify hormone therapy as the cause of a particular woman's breast cancer by using differential diagnosis, one would have to eliminate all other possible causes. But as the experts on both sides and Plaintiffs' treating doctors agree, a woman is at increased risk of breast cancer simply because she is female and at the age of menopause (with increasing risk as she grows older).<sup>63</sup> These are risk factors that ***cannot be eliminated*** as part of a differential diagnosis.<sup>64</sup> Moreover, beyond age and gender, most women who develop breast cancer have no known risk factors,<sup>65</sup> making the process of elimination completely unworkable in this setting.<sup>66</sup>

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<sup>61</sup> Deposition of Dr. Michael Edwards (May 19, 2006) ("Edwards Dep.") (App., Ex. 32) at 157:15-21; 158:10-14 (emphasis added); *see also* Deposition of Dr. Robert Langer (May 10, 2006) ("Langer Dep.") (App., Ex. 39) at 194:7-11 ("A differential diagnosis as we use it clinically is quite a bit different from assessing causation.").

<sup>62</sup> Stovall Decl.

<sup>63</sup> *See* Westbrook Aff. ¶¶ 4-5; Harrington Dep. at 31:21-32:1; Kozlowski Dep. 34:8-35:1; McPherson Dep. 325:20-326:20.

<sup>64</sup> Said differently, most women who develop breast cancer have no risk factors other than the fact that they are women and have reached menopause. The cause of their breast cancers is unknown—*i.e.*, the "X" factor. A differential diagnosis cannot rule out the "X" factor.

<sup>65</sup> *See, e.g.*, Waldron Dep. at 70:7-13 ("Q: Now, some women who get breast cancer don't have any known risk factors for the disease. Is that right? A: Right. These are all

Even if differential diagnosis could be used to determine the cause of a woman's breast cancer, Drs. Klimberg and Waldron's use of the technique is a parody of the real thing . . . .

**a. The risk factors for breast cancer.**

Before considering just what Drs. Klimberg and Waldron did (and did not) do in performing a differential diagnosis, it is necessary to identify the risk factors for breast cancer and their relative importance.

Drs. Klimberg and Waldron admit that there are more than a dozen recognized risk factors for breast cancer, including age, race, gender, family history of breast cancer, previous hyperplasia, previous breast biopsies, the breast cancer gene, early menarche,<sup>67</sup> late menopause, delayed or no childbearing, placental weight, obesity, alcohol consumption, fat intake (particularly in childhood), sedentary lifestyle, higher socioeconomic status, stress, residence in an urban area, and residence in North America or Northern Europe.<sup>68</sup> The greatest risk factor is simply age.<sup>69</sup> According to Plaintiffs' expert, Dr. Klim McPherson, a woman's risk of breast cancer increases by 1,000% (translatable to a relative risk of 10.0) by merely living (*i.e.*, aging).<sup>70</sup> Dr. Klimberg herself testified that a woman aged 65 has a six-fold increase in risk of

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epidemiologic associations and certainly, there are other situations in which a given person does not have those associations.")

<sup>66</sup> Stovall Decl.

<sup>67</sup> Menarche is the onset of menstruation; menarche at or before the age of 12 is generally considered to be early menarche.

<sup>68</sup> Klimberg Dep. at 127:4-7, 246:19-247:16; 248:7-9; 248:17-24; 258:3-12; 314:12-18; Waldron Dep. at 46:18-58:15.

<sup>69</sup> Colditz Dep. at 108:12-15.

<sup>70</sup> McPherson Dep. at 325:20-326:3; 326:7-13; 326:16-20 ("Q: Okay. So, if you never take hormone replacement therapy ever in your life— A. As was true more than 40 years ago. Q. —just by living a woman's risk of breast cancer is going to go up tenfold over time;

breast cancer over a woman in her late 30s or 40s.<sup>71</sup> By contrast, the relative risk of breast cancer associated with hormone therapy (1.24, as reported by WHI) is considered a “weak risk factor,” on the same order of magnitude as the increased risk associated with childhood consumption of French fries.<sup>72</sup> Drs. Waldron and Klimberg acknowledge that many of these risk factors carry a higher relative risk than does hormone therapy:

<i>Risk Factor:</i>	<i>Relative Risk:</i>
Consumption of 1 to 2 glasses of wine per day <sup>73</sup>	1.6
Obesity <sup>74</sup>	1.5 -2.0
Late menopause <sup>75</sup>	1.5
No children <sup>76</sup>	1.4
Stress <sup>77</sup>	1.3
Childhood consumption of french fries <sup>78</sup>	1.27
Hormone therapy	1.24

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correct? A. Yes . . . . Q. When we say greater than tenfold, if we convert that to a percentage, what percentage would greater than tenfold be? A. I suppose a thousand. Q. So a woman’s risk of developing breast cancer increases by over a thousand percent just for the mere fact of living? . . . . A: Yes. Q. Even if she doesn’t take hormone replacement therapy or doesn’t engage in any other risk factors; correct? A. That’s right.”).

<sup>71</sup> Klimberg Dep. at 318:14-320:4.

<sup>72</sup> Colditz Dep. at 69:9-12; 163:18-164:7.

<sup>73</sup> Klimberg Dep. at 252:22-254:3.

<sup>74</sup> Waldron Dep. at 61:9-15.

<sup>75</sup> *Id.* at 69:22-70:6.

<sup>76</sup> Waldron Dep. at 62:19-63:3.

<sup>77</sup> Klimberg Dep. at 258:8-12.

<sup>78</sup> Waldron Dep. at 54:13-57:2.



Both Drs. Waldron and Klimberg also acknowledge the critical fact that many women diagnosed with breast cancer have ***no*** risk factors at all:

- Q. Now, some women who get breast cancer don't have any known risk factors for the disease. Is that right?
- A. Right. These are all epidemiologic associations and certainly, there are other situations in which a given person does not have those associations.
- Q. And some women who have multiple risk factors for breast cancer never develop the disease. Correct?
- A. That's correct.
- \* \* \*
- Q. And even though doctors and scientists have identified risk factors for developing breast cancer, they still don't know what causes breast cancer. Isn't that correct?
- A. Yes.<sup>79</sup>

Given these facts, Drs. Klimberg and Waldron cannot possibly have carried out a “reliable differential diagnosis”<sup>80</sup>—in the words of the Eighth Circuit, one in which “***all other possible causes of the victims’ condition can be eliminated***, leaving only the toxic substance as the cause.”<sup>81</sup> As explained below, they did not eliminate all other possible causes; they ignored what they could not eliminate. This renders their opinions inadmissible, for “any step that renders [the expert’s] analysis unreliable . . . renders the expert’s testimony inadmissible. This is true whether the step completely changes a reliable methodology or merely misapplies that methodology.”<sup>82</sup>

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<sup>79</sup> *Id.* at 70:7-71:5; also Klimberg Dep. at 125:3-126:20.

<sup>80</sup> *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 758 (3d Cir. 1994).

<sup>81</sup> *Turner v. Iowa Fire Equip. Co.*, 229 F.3d 1202, 1209 (8th Cir. 2000) (emphasis added).

<sup>82</sup> *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d at 745.

**b. What Dr. Klimberg did.**

Dr. Klimberg testified that Ms. Rush's age, race, obesity, and lack of children were all risk factors for breast cancer.<sup>83</sup> Dr. Waldron added that the early onset of menarche and the late onset of menopause were also risk factors in Ms. Rush's case.<sup>84</sup> Dr. Klimberg did not recognize any risk factors for Ms. Reeves other than her use of hormone therapy, although she testified that the relative risk of breast cancer in a white woman over the age of 60 is 1.7 (and Ms. Reeves was, in fact, 61 years old when she was diagnosed with breast cancer).<sup>85</sup>

How did Dr. Klimberg eliminate the several risk factors that are present in Ms. Rush's case? As to three of the four—age, race and nulliparity—she gave no explanation at all.<sup>86</sup> As to obesity, she gave the nonsensical explanation that that risk could be ignored because many women are obese: “And, and if you're looking at a population, you know, if everybody's overweight, then, then I'm not sure that that's a significant contributor for that population.”<sup>87</sup> This is to say, in effect, that because there are obese women who do not develop breast cancer (or, perhaps, that there are obese, white women over the age of 60 who do not develop breast cancer), that risk factor[s] could not have caused Ms. Rush's breast cancer. This does not constitute differential diagnosis, for Dr. Klimberg did not eliminate other risk factors by demonstrating their *absence*, she just brushed aside risk factors known to be *present*.

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<sup>83</sup> Klimberg Dep. at 125:20-126:9, 200:23-201:7, 311:8-12, 313:10-314:10.

<sup>84</sup> Waldron Dep. at 57:22-70:6.

<sup>85</sup> Klimberg Dep. at 200:23-201:7.

<sup>86</sup> Indeed, as to age, Dr. Klimberg said that it put Ms. Rush in a “high-risk category” and was a cause of her breast cancer. *Id.* at 497:23-498:2 (“But I’ll give you that just on age. So age contributes to that. There is no, no question.”).

<sup>87</sup> *Id.* at 499:4-8.

Dr Klimberg's "differential diagnosis" of Ms. Reeves reflects the same illogical approach. She fails to eliminate age as a risk factor (Ms. Reeves was 61 years old when she was diagnosed) and fails to take any account of the fact that most women who develop breast cancer do not have any risk factor (other than the fact that they are women). This "X" factor cannot be eliminated. Also undercutting Dr. Klimberg's analysis is her recognition that Ms. Reeves' own endogenous hormones were affecting her breast tissue at the same time she was using hormone therapy, and that no test or methodology exists "to segregate out the effect of her endogenous hormones from the exogenous hormones."<sup>88</sup>

In sum, *Daubert* requires that Dr. Klimberg have adhered to a reliable methodology. Even assuming that differential diagnosis is such a methodology for breast cancer (given that all risk factors are not known), she has only paid lip service to it.

**c. What Dr. Waldron did.**

Dr. Waldron's reductive reasoning regarding causation fares no better. He, like Dr. Klimberg, identified hormone therapy as the cause of Plaintiffs' breast cancer without explaining how he eliminated other possible causes, including the relatively high risk of breast cancer attributable to the fact that Plaintiffs are white and were more than 60 years old when diagnosed. Even putting these factors aside, there is the "X" factor:

- Q. Have you seen it in some of the publications that you have read that most women diagnosed with breast cancer have no known risk factors other than gender and age?
- A. I guess in terms of those numbers, that might well be the case, yes.
- Q. And so the fact that Ms. Reeves had no identifiable risk factors other than her sex and age does not set her apart in

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<sup>88</sup> Klimberg Dep. at 509:15-510:11

any way from the majority of women her age diagnosed with breast cancer. Is that correct?

A. Right.<sup>89</sup>

How, then, does Dr. Waldron eliminate the possibility that Ms. Reeves and Ms. Rush are like the majority of white women over the age of 60 who develop breast cancer? He does not; he simply leaps over those facts to his conclusion. This results-driven methodology does not satisfy

*Daubert*:

Essentially, this is a bit like saying that if a person has a scratchy throat, runny nose, and a nasty cough, that person has a cold; if, on the other hand, that person has a scratchy throat, runny nose, nasty cough, and wears a watch, they have a watch-induced cold. Such reasoning is extremely suspect, which has prompted other courts to reject it as unscientific.<sup>90</sup>

**2. The “Gail model” is not a reliable methodology to determine the cause of breast cancer.**

Dr. Klimberg also bases her conclusions regarding causation on the Gail model, a test that combines a number of risk factors for breast cancer to arrive at an overall lifetime risk of cancer for a particular woman. But as Dr. Westbrook has explained, the Gail model was not designed to identify the cause of cancer in a particular woman and its use for that purpose has never been validated through testing: “I am aware of no published literature which would support use of the Gail Model of this purpose.”<sup>91</sup> Dr. Klimberg admitted as much:

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<sup>89</sup> Waldron Dep. at 367:4-15.

<sup>90</sup> *Kelley v. Am. Heyer-Schulte Corp.*, 957 F. Supp. 873, 882 (W.D. Tex. 1997) (rejecting expert’s opinion under *Daubert* that plaintiff’s injury was caused by breast implants because the expert admitted “that if the Plaintiff did *not* have breast implants but had the exact same symptoms and blood chemistry, then his diagnosis would have been non-implant-caused Sjogren’s Syndrome”) (emphasis in original).

<sup>91</sup> Westbrook Aff. ¶ 10.

Q. So are you aware of any study that has looked at the ability of the Gail model to predict or to identify the cause of breast cancer in an individual woman?

A. No, no.

Q. That's not what the Gail model is designed to do, is it?

A. No . . . .

\* \* \*

Q. And it has never been authenticated to identify causes of breast cancer in individual women, has it? Is that correct?

A. That is correct . . . .<sup>92</sup>

Plaintiffs' expert epidemiologist, Dr. Colditz, confirmed that the function of the Gail model is not to determine—retrospectively—the cause of a woman's breast cancer: "It is really designed to identify a population of women at higher risk, not the individual woman who will go on to get cancer and those who will not."<sup>93</sup> Indeed, it should be self-evident that the model cannot be used retrospectively to determine the cause of a woman's breast cancer, because it only takes into account a handful of the ten or more risk factors for breast cancer.<sup>94</sup>

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<sup>92</sup> Klimberg Dep. at 294:10-18; 295:1-5.

<sup>93</sup> Colditz Dep. at 182:21-183:1. Dr. Colditz criticized the Gail model's utility even when used for its true purpose of identifying women at high-risk of breast cancer. Colditz Dep. at 64:21-23 ("we've shown that it does a poor job as a screening tool to identify high-risk women"). Dr. Colditz has further questioned whether any model can serve that purpose, as "it is unlikely that in the near future any breast cancer risk prediction model will attain a high level of risk-screening accuracy because of the modest strengths of association between breast cancer and nearly all its recognized risk factors." Beverly Rockhill et al. (Colditz is a co-author), *Breast cancer risk prediction with a log-incidence model: Evaluation of Accuracy*, 56 J. Clinical Epidemiology 856, 860 (2003) (App., Ex. 58).

<sup>94</sup> Dr. Klimberg conceded that the Gail model does not account for a number of established risk factors, including obesity, which is one of Ms. Rush's risk factors. Klimberg Dep. at 261:19-262:7, 262:13, 265:16-18.

## CONCLUSION

If ever proposed expert testimony should set off *Daubert* alarms, this is it. First, Drs. Klimberg and Waldron have testified that doctors “don’t know what causes breast cancer,”<sup>95</sup> and have no established test or methodology to attempt to pinpoint any particular risk factor (including hormone therapy) as playing any role in a particular case.<sup>96</sup> Second, Plaintiffs’ other experts agree.<sup>97</sup> Third, Plaintiffs’ doctors agree.<sup>98</sup> Fourth, Defendants’ experts agree. Fifth, authoritative and neutral third parties come to the same conclusion.<sup>99</sup> Sixth, everyone agrees that most women diagnosed with breast cancer do not have a known risk factor other than age and gender.

It is in this context that Drs. Klimberg and Waldron opine that hormone therapy caused Plaintiffs’ breast cancers, even though Ms. Reeves and Ms. Rush have other risk factors. Three judicial admonitions therefore apply here:

- where an expert’s conclusion “simply does not follow from the data, a district court is free to determine that an

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<sup>95</sup> See *supra* n.28.

<sup>96</sup> See *supra* n.30.

<sup>97</sup> See *supra* n.34-37.

<sup>98</sup> See *supra* n.27.

<sup>99</sup> The National Cancer Institute says that “[n]o one knows why some women develop breast cancer and others do not,” and it has excluded hormone replacement therapy as a risk for breast cancer in its Breast Cancer Risk Assessment Tool because the evidence that it “contribute[s] to breast cancer risk is not conclusive, or researchers cannot determine how much [it] contribute[s] to breast cancer risk as precisely as with the factors listed [in the Tool].” National Cancer Institute, Fact Sheet, Estimating Breast Cancer Risk: Questions and Answers (2006) (App., Ex. 55).

impermissible analytical gap exists between premises and conclusion;”<sup>100</sup>

- “[w]hen a scientist claims to rely on a method practiced by most scientists, yet presents conclusions that are shared by no other scientist, the district court should be wary that the method has not been faithfully applied;”<sup>101</sup> and
- “the courtroom is not the place for scientific guesswork, even of the [most] inspired sort.”<sup>102</sup>

The fact that the “[l]aw lags science; it does not lead it”<sup>103</sup> creates the possibility of injustice in litigation where the risk is great and science has simply not had time to prove it. But that is not this litigation. The medical and scientific community has known for decades that there may be some association between hormones and breast cancer. Several score of studies, including the WHI Study, have consistently shown that the risk is “very low,” particularly when prescribed to women the ages of Ms. Reeves and Ms. Rush, for whom the absolute risk was “very, very low.” And, not least, Wyeth always warned about it. But the leap from risk to cause is not one that science can yet make and, accordingly, is not one that Drs. Klimberg and Waldron can reliably make in this litigation.

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<sup>100</sup> *Bitler v. A.O. Smith Corp.*, 400 F.3d 1227, 1233 (10th Cir. 2004), *cert. denied*, 126 S. Ct. 163 (2005).

<sup>101</sup> *Lust v. Merrell Dow Pharm., Inc.*, 89 F.3d 594, 598 (9th Cir. 1996).

<sup>102</sup> *Rosen v. Ciba-Geigy Corp.*, 78 F.3d 316, 319 (7th Cir. 1996).

<sup>103</sup> *Id.*

Respectfully submitted,

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DATED: June 5, 2006



**CERTIFICATE OF SERVICE**

I hereby certify that on this 5th day of June 2006 a true and correct copy of the foregoing Memorandum in Support of Defendants' Motion to Exclude the Testimony of Drs. Klimberg and Waldron as to Specific Causation was electronically filed with the Clerk of Court using the CM/ECF system and a true and correct copy was forwarded by e-mail and first-class mail, postage prepaid, to the parties listed below.

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